

WHAT IS CLAIMED IS:

5

1. A retransmission control method in a multicast service providing system in which an information delivery apparatus delivers multicast information to radio terminals within a service area of the information

10 delivery apparatus, said method comprising:

(a) determining at least one radio terminal permitted to be placed in retransmission control; and

15 (b) delivering, when a request for retransmission concerning the multicast information sent by said at least one radio terminal is received by the information delivery apparatus, the multicast information to the radio terminals within the service area.

20

2. The retransmission control method as claimed in claim 1, wherein:

25 the step (a) comprises a step of determining, at the information delivery apparatus, said at least one radio terminal; and

the retransmission control method further comprises a step of notifying said at least one radio terminal that a request for retransmission is permitted.

30

3. The retransmission control method as claimed  
in claim 1, wherein the step (a) comprises a step of  
determining, at each radio terminal, whether its own  
terminal is permitted to be placed in retransmission  
5 control.

10 4. The retransmission control method as claimed  
in claim 1, wherein the step (a) determines a plurality of  
radio terminals to be placed in retransmission control.

15

5. The retransmission control method as claimed  
in claim 1, wherein:  
the step (a) comprises a step of grouping radio  
20 terminals in the service area on the basis of unique  
information assigned to the radio terminals; and  
the step (a) determines at least one radio  
terminal on the basis of grouping radio terminals.

25

6. The retransmission control method as claimed  
in claim 1, wherein the step (a) determines at least one  
30 radio terminal on the basis of a quality of communications  
between the information delivery apparatus and each of the  
radio terminals.

7. The retransmission control method as claimed  
5 in claim 1, wherein the step (a) determines at least one  
radio terminal on the basis of distances between the  
information delivery apparatus and the radio terminals.

10

8. The retransmission control method as claimed  
in claim 1, wherein the step (a) determines at least one  
radio terminal on the basis of directions of the radio  
15 terminals from the information delivery apparatus.

9. The retransmission control method as claimed  
20 in claim 1, wherein the step (a) determines at least one  
radio terminal on the basis of moving speeds of the radio  
terminals.

25

10. The retransmission control method as  
claimed in claim 1, further comprising a step of changing  
30 said at least one radio terminal to another radio terminal  
on the basis of status of retransmission requests.

11. The retransmission control method as claimed in claim 1, further comprising a step of changing said at least one radio terminal to another radio terminal when said at least one radio terminal terminates reception of the multicast information.

10

12. An information delivery apparatus delivering multicast information to radio terminals located within a service area via a radio section, said comprising:  
a first unit determining at least one radio terminal permitted to be placed in retransmission control; and  
a second unit delivering, when a request for retransmitting the multicast information sent by said at least one radio terminal is received, the multicast information to the radio terminals within the service area.

25

13. The information delivery apparatus as claimed in claim 12, wherein the first unit determines a plurality of radio terminals to be placed in retransmission control.

30

14. The information delivery apparatus as claimed in claim 12, further comprising a third unit changing said at least one radio terminal determined by the first unit to another radio terminal on the basis of retransmission requests.

10

15. The information delivery apparatus as claimed in claim 14, further comprising a fourth unit managing status of retransmission requests sent by radio terminals placed in the retransmission control,

15 the third unit changing said at least one radio terminals on the basis of the status of retransmission requests managed by the fourth unit.

20

16. A radio terminal receiving multicast information from an information delivery apparatus via a radio section, said radio terminal comprising:

25 a first unit determining whether its own terminal is placed in retransmission control; and

a second unit requesting retransmission concerning the multicast information which has not been duly received in a case whether the first unit determines  
30 its own terminal to be placed in retransmission control.

17. The radio terminal as claimed in claim 16,  
wherein the first unit determines whether its own terminal  
is placed in retransmission control on the basis of given  
5 information sent by the information delivery apparatus.

10 18. The radio terminal as claimed in claim 16,  
wherein the first unit determines whether its own terminal  
is placed in retransmission control on the basis of a  
quality of communications with the information delivery  
apparatus.

15

19. The radio terminal as claimed in claim 16,  
20 further comprising a third unit which corrects the  
multicast information by part of the multicast information  
sent by the information delivery apparatus retransmitted  
in response to a request for retransmission by the second  
unit when the first unit determines that its own terminal  
25 is placed in retransmission control and which corrects the  
multicast information by part of the multicast information  
sent by the information delivery apparatus transmitted in  
response to a request for retransmission by another radio  
terminal when the first unit determines that its own  
30 terminal is placed out of retransmission control.